IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventor: Mazzara, William E.

METHOD AND SYSTEM FOR RESPONDING TO
DIGITAL VEHICLE REQUESTS

Filed via EFS

Group Art Unit: 2617

Examiner: Phoung, Dai

APPEAL BRIEF

Board of Patent Appeals and Interference
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

On June 1, 2009, Appellant filed a Notice of Appeal of the final rejection mailed December 30, 2008. The appeal covers claims 1-3, 5, 6, 8, and 21-32 which were rejected on prior art grounds. Appellant respectfully traverses and appeals those rejections.

Appellant requests that the fees paid in connection with the previously-filed Appeal Brief filed on December 3, 2007 be applied to the present Appeal Brief. Please charge any other required fees or credit any excess to Deposit Account No. 07-0960.

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(i) Real Party in Interest

The real party in interest is the assignee of the Appellant inventor who assigned all of his right, title and interest to General Motors Company, a Michigan corporation, having its principal place of business at 300 Renaissance Center, Detroit, Michigan 48265-3000.

(ii) Related Appeals and Interferences

There are no other appeals and/or interferences known to Appellant, his assignee, and/or legal representatives that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

(iii) Status of Claims

In the final Office Action of December 30, 2008, claims 1-3, 5, 6, 8, and 21-32 were rejected under 35 U.S.C. § 103(a). Claims 4, 7, and 9-20 were previously cancelled. The application does not contain any other claims.

Appellant is appealing the rejections of claims 1-3, 5, 6, 8, and 21-32.

(iv) Status of Amendments

No amendment has been filed subsequent to the final rejection.

(v) Summary of Claimed Subject Matter

In accordance with 37 C.F.R. 41.37(c)(1)(v), a concise explanation is provided below of subject matter defined in each of the independent claims involved in this appeal, with reference to the specification by page and line numbers and to the drawings by reference characters. Also in accordance with 37 C.F.R. 41.37(c)(1)(v), for each dependent claim argued separately under the provisions of 37 C.F.R. 41.37(c)(1)(vii), every means plus function as permitted by 35 U.S.C. 112, sixth paragraph, is identified and the structure, material, or acts described in the specification as corresponding to each claimed function is set forth with reference to the specification by page and line numbers, and to the drawings by reference characters.

Independent claims 1 and 21 are directed to responding to digital requests. According to claim 1, a voice query is received at a telematics unit in a vehicle. (Fig. 2, Block 225; Page 10, Lines 8-9) Then, the voice query is converted to a digital signal. (Fig. 2, Block 230; Page 10, Lines 11-16) Next, the digital signal is transmitted from the telematics unit to a computer-end recipient at a call center node in communication with an information database, wherein the digital signal is sent to the computer-end recipient at the call center node via digital packet protocol over a wireless network. (Fig. 2, Blocks 235 and 240; Page 11, Lines 1-15) The digital signal is parsed using the computer-end recipient at the call center node to determine an inquiry. (Fig. 2, Block 245; Page 11, Lines 16-17) The information database is accessed based on the inquiry. (Fig. 2, Block 250; Page 11, Lines 21-22) A response to the inquiry is formulated using the computer-end recipient. (Fig. 2, Block 250; Page 11, Lines 20-21) The formulated response is transmitted via the digital packet data protocol over the wireless network to the telematics unit. (Fig. 2, Block 255; Page 11, Lines 24-30) And finally, the formulated response is translated to an analog format for playback in a vehicle. (Fig. 2, Block 260; Page 12, Lines 1-5)

Independent claim 21 also encompasses receiving a voice query at a vehicle. First, a voice query is received at a telematics unit in a vehicle. (Fig. 2, Block 225; Page 10, Lines 8-9) Then, the voice query is converted to a digital signal. (Fig. 2, Block 230; Page 10, Lines 11-16) Next, the digital signal is transmitted from the telematics unit to a remote computer-end recipient via digital packet data protocol. (Fig. 2, Blocks 235 and 240; Page 11, Lines 1-15) The digital signal is parsed using the computer-end recipient at the call center node to determine an inquiry.

(Fig. 2, Block 245; Page 11, Lines 16-17) A response to the inquiry is formulated. (Fig. 2, Block 250; Page 11, Lines 20-21) A transmission via digital cellular packet data protocol of at least one formulated response is received at the telematics unit. (Fig. 2, Block 255; Page 11, Lines 5-15) And finally, a response is presented. (Fig. 2, Block 260; Page 12, Lines 1-7)

Although the Appellant has provided the summary of claimed subject matter with references to specific embodiments of the invention to comply with the requirements set forth in the relevant provisions of 37 C.F.R., this summary has been provided to aid the Board in evaluating the appeal and is not intended to limit the meaning or definition of any terms in the claims. Furthermore, it should be appreciated that the above-provided reference numerals and pages/line numbers are only for exemplary purposes, as other instances and/or embodiments of the claimed elements could appear elsewhere in the application.

(vi) **Grounds of Rejection to be Reviewed on Appeal**

The issues on appeal are:

1)   whether the subject matter of claims 1-3, 5-6, 8, 21-23, and 27-29 is unpatentable under 35 U.S.C. § 103(a) over Odinak (U.S. Patent Publication No. 2005/0065779) in view of Myr (U.S. Patent Publication No. 2001/0029425);

2)   whether the subject matter of claims 24-26 and 30-32 is unpatentable under 35 U.S.C. § 103(a) over Odinak in view of Myr and further in view of Austin (U.S. Patent No. 6,236,855); and

3)   whether the subject matter of claims 24-26 and 30-32 is unpatentable under 35 U.S.C. § 103(a) over Odinak in view of Myr and further in view of Heidari (U.S. Patent No. 5,854,978).

(vii) <u>Argument</u>

<u>Claims 1-3, 5-6, 8, 21-23 and 27-29—</u>

Claims 1-3, 5-6, 8, 21-23, and 27-29 were rejected as unpatentable under 35 U.S.C. § 103(a) over Odinak in view of Myr. The rejection is traversed because it relies on a reference that has not been demonstrated to be prior art and, in any event, the applied references do not disclose or render obvious the subject matter of independent claims 1 and 21, regardless of whether they are considered singly or in combination. In particular, the rejection is traversed because: 1) the Examiner has failed to establish a valid § 103(a) rejection because Odinak does not antedate the present application; 2) the earlier Odinak cited by the Examiner is missing elements of Appellant's claims; and 3) Myr does not make up for the deficiencies of Odinak.

1) Claims 1 and 21—The Odinak Reference Used in the Rejection Is Not Valid Prior Art

The Final Office Action fails to set forth a *prima facie* case for obviousness because it has not established that the portions of Odinak relied on by the Examiner in the Final Office Action constitute prior art. The Final Office Action relies primarily on Odinak in all rejections of Appellant's claims under § 103. But Appellant's filing date predates the Odinak reference. The Odinak reference was filed on August 2, 2004 and published on March 24, 2005 while the present application was filed on September 30, 2003, over ten months before Odinak's filing date. Thus, any prior art effect of the reference must be by virtue of its inclusion of subject matter from the earlier filed application(s) from which it claims priority. And, for this, given that Odinak is a <u>continuation-in-part</u> application, the Odinak reference by definition contains at least some new matter not present in each of the earlier applications. See MPEP § 201.08. As a result, to meet the required burden for establishing a *prima facie* case of obviousness, the Examiner must establish that the portions of the disclosure from Odinak being used in the rejection antedates Appellant's subject matter by being present together in at least one of the earlier applications from which priority is claimed.

In this regard, Appellant notes that Odinak pulls subject matter from at least nine different earlier applications, none of which appear to disclose all of the subject matter for which it is being cited. Thus, it is not entitled to the earlier filing dates under § 120 for that subject

matter because none of the earlier applications have been shown to meet § 112 support for that subject matter.

2) Claims 1 and 21—The Earlier Odinak Reference Cited by the Examiner Is Missing Elements of Appellant's Claims

The Examiner responds to argument (1) made above in an Advisory Action by pointing to one of the nine earlier Odinak applications as providing the needed support for the Odinak CIP. In particular, the Examiner asserts two things: 1) that the identified earlier Odinak reference (USSN 10/059,905, published Oct. 3, 2002 as US 2002/0141547) is prior art in this case; and 2) that Fig. 1 along with paragraphs 24 and 25 of that earlier Odinak reference provide the support needed for the disclosure relied upon from the Odinak CIP that is used as the basis for rejection. As to the first of these, Appellant concedes that the earlier Odinak reference is presumptively prior art, although Appellant reserves the right to predate the reference via suitable affidavit or other evidence. With respect to the Examiner's second argument, it is wrong because the excerpts of the earlier filed Odinak reference identified by the Examiner only provide support for a portion of the relied upon subject matter from the Odinak CIP.

In fact, the Examiner's rejection itself belies his argument that the earlier Odinak reference provides the necessary support. The Examiner's rejection relies on paragraph 205 and Figure 61 in the Odinak CIP to teach several steps recited in claims 1 and 21.[1] However, that relied upon disclosure from the Odinak CIP is nowhere found in either paragraphs 24, 25, Fig. 1 or any of the other portions of the earlier Odinak reference. For instance, claim 1 recites, *inter alia,* the steps of "formulating at least one response to the inquiry using the computer-end recipient," "transmitting the at least one formulated response via the digital packet data protocol over the wireless network to the telematics unit," and "translating the at least one formulated response via the digital packet data protocol to an analog format for playback in the vehicle." Each of these steps has been rejected on the basis of paragraph 205 of the Odinak CIP, but Appellant can find no teaching or disclosure in paragraphs 24 or 25 or Fig. 1 of the earlier Odinak reference that would support paragraph 205 of the Odinak CIP or that would otherwise render obvious claims 1 or 21. Thus, the Examiner has not established that the disclosure from

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[1]   Final Office Action, page 3, line 15-page 4, line 9.

the Odinak CIP used in the rejection was present in the earlier Odinak reference or in any single one of the eight other earlier Odinak applications. And even if the various limitations of Appellant's independent claims 1 and 21 were sprinkled across two or more of the nine earlier Odinak applications, the Examiner's reliance on the Odinak CIP for the disclosure effects an impermissible end-around the § 103 requirements that must be observed when combining separate teachings from the prior art. Again, the Odinak CIP was filed <u>after</u> the instant application. And since the Examiner fails to provide any analysis relating to claim 21 beyond simply referring to the rejection of claim 1, it follows that the Examiner has again relied on paragraph 205 of the later-filed Odinak reference to reject claim 21 as well. Therefore, the relied-upon combination of Odinak and Myr is missing elements of both Appellant's independent claims 1 and 21.

3) Claims 1 and 21— Myr Fails To Solve Odinak's Deficiencies

Myr is cited by the Examiner as teaching transmitting at least one formulated response via the digital packet data protocol over the wireless network to the telematics unit.[2] However, Myr fails to make up for Odinak's lack of disclosure of the features noted above that are not in the earlier Odinak reference.

Accordingly, for at least the foregoing reasons, Appellant respectfully submits that independent claims 1 and 21 and each of their dependent claims patentably define over the combination of Odinak and Myr.

Claims 24-26 and 30-32—

Claims 24-26 and 30-32 were rejected as unpatentable under 35 U.S.C. § 103(a) over Odinak in view of Myr and further in view of Austin (U.S. Patent No. 6,236,855). Claims 24-26 and 30-32 were also rejected as unpatentable under 35 U.S.C. § 103(a) over Odinak in view of Myr and further in view of Heidari (U.S. Patent No. 5,854,978). Appellant respectfully traverses these rejections of dependent claims 24-26 and 30-32 for at least the reason that neither Austin nor Heidari makes up for the deficiencies of Odinak and Myr and thus the combinations do not

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[2]   Final Office Action, page 4, lines 15-17.

render obvious the subject matter of the base independent claims nor these dependent claims themselves.

In addition, claims 26 and 32 are allowable for reasons other than their dependence on allowable base claims. The Final Office Action improperly combines Appellant's explanation of claims 24 and 32 with the teachings of Austin to render these claims obvious. With respect to Austin, the Examiner points to Appellant's arguments made in the first Appeal Brief and combines those arguments with Austin to reject the claims. At a minimum, the Examiner misquotes Appellant. Or more specifically, the Examiner's citations from Appellant's brief do not match the content attributed to Appellant. For instance, the Final Office Action states that Appellant argued in the first Appeal Brief that the "compression algorithm may compress the audio data at 2 to 3 times the compression ratio of human recognizable audio data compression (Page 10, Lines 22-26) [and t]he response that is generated is also digital and may be directly encoded and compressed for a human-end recipient. (Page 11, Lines 22-23)"[3] Those page and line number citations from the Appeal Brief have nothing to do with the compression issue. However, Appellant notes that the first Appeal Brief does discuss the compression feature of claims 26 and 32 on page 12, stating that the "the digitized signal (digitized voice query) is compressed with a compression ratio at least twice the compression ratio used to compress the (at least one) response."

Apart from the mischaracterization of Appellant's claims 26 and 32, neither Austin nor Heidari teach or otherwise disclose Appellant's claimed subject matter. Claims 26 and 32 recite, *inter alia*, "wherein the digital signal is compressed with a compression ratio at least twice the compression ratio used to compress the at least one response." This can be used to compress the voice query sent from the vehicle to the remote recipient at a higher compression than is used for the formulated response being sent back. *Neither* Austin nor Heidari teach or disclose this limitation. For instance, the Examiner points to col. 1, line 15-col. 2, line 34 of Austin for support. But nothing in this section of Austin renders obvious Appellant's claims. Austin variously discloses vocoders and compression techniques and gives an example of a compression ratio. In that example, Austin discloses that if a digitized voice signal input to the vocoder is 64 kilobits per second (kbps) and if the output from the vocoder is 8 kbps then the vocoder has

compressed the input at an 8:1 ratio. However, Austin's disclosure of a compression ratio does not teach or render obvious using a compression ratio for one signal that is at least twice that used for another signal. This is what is being recited in claims 26 and 32.

Similarly, nothing in Heidari renders obvious the subject matter of claims 26 and 32. The relied-upon disclosure teaches signals at various compression ratios, but these ratios do not teach compressing a digital signal with a compression ratio at least twice the compression ratio used to compress at least one response. And regardless of the compression ratios taught by Heidari, any response signal taught by Heidari is compressed at the <u>same ratio</u> as a corresponding digital signal and as a result cannot be viewed as rendering obvious Appellant's claims involving <u>different ratios</u>. For instance, Heidari is directed to telephonic signals in a mobile telephone and coping with severe restrictions on bandwidth during times of heavy traffic, such as peak demand during the daytime. Heidari teaches that late at night there is lower traffic and subscribers may be allocated more bandwidth and therefore communications signals between a mobile phone and a base station can be compressed at a lower ratio. Thus, when the mobile phone is used during a time of heavy bandwidth traffic, both it's signals sent to and received from the base station are compressed or decompressed at a certain ratio. Later, at a time when bandwidth traffic slows, the sent and received signals are compressed or decompressed at a lower ratio. In that sense, while the compression ratio between the mobile phone and the base station may change, the signals sent between them will have the same compression ratio. For instance, the teachings of Heidari indicate that the mobile phone receives a program from the base station that directs the phone to compress/decompress receptions/transmissions according to the compression scheme received by the phone. More particularly, Heidari teaches the DSP of a mobile phone receiving from the base station a program "that directs the DSP to perform compression and expansion of voice/data signals in accordance with the protocol employed by the numerous mobile telephones that communicate with the common base station" and if the compression ratio needs to be altered, new programs are transmitted replacing the old.[4] The mobile phone compresses/decompresses telephone signals at the rate directed by the program (i.e. one rate). As the mobile phone moves from one cell to another, the mobile phone must change the program specifying compression ratio (protocol) to match that of the cell in which it operates, thereby

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[3]   Final Office Action, page 7, lines 15-19.

indicating that the compression ratio of the phone matches that of the cell. Heidari reinforces this interpretation by describing how the mobile telephone moves between cells that use different protocols. Heidari states that "the system 10...must have the ability to change the protocol in the event that such change is necessary."[5] That is, the mobile phone changes its protocol to match that of the cell it is moving into when the cell the mobile phone moves from has a different protocol than the cell the phone moves to. The mobile phone can then maintain the same protocol as the base station. Absent in this disclosure is any support for the interpretation that a digital signal is compressed with a compression ratio at least twice the response. And the Examiner has not identified any teaching in Heidari, explicit or otherwise, that would suggest modifying Heidari to do so.

The Examiner does cite a section of Heidari, but Appellant can find nothing in it that would render obvious the claimed subject matter. Figure 4 shows four graphs, each involving signal compression at different ratios suitable for use with a mobile telephone. This figure is the subject of the Examiner's cited section.[6] Each graph in Figure 4 depicts a periodic waveform having a large pulse (P) followed by a sequence (S) of smaller pulses. And three waveforms are compressed at 2:1, 4:1, and 8:1, while one waveform appears to be uncompressed. While this section of Heidari may teach various signal compression ratios, it appears to merely be showing examples of how different compression ratios could be implemented when lesser or greater compression is desired (e.g., during the night v. during the day). As with the remainder of Heidari, it is silent with respect to compressing one signal using a compression ratio at least twice the ratio of the response back. Nor does it provide any teaching or suggestion that would lead one of ordinary skill in the art to do so. Thus, like Austin, Heidari cannot be reasonably interpreted as rendering obvious the subject matter of claims 26 and 32 and these claims are separately patentable for this reason in addition to their dependence on their respective independent base claims.

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[4]   Heidari, U.S. Patent No. 5,854,978, col. 2, lines 26-31.
[5]   Heidari, col. 4, lines 13-15.
[6]   Final Office Action, page 9, lines 1-3; Heidari, U.S. Patent No. 5,854,978, col. 8, lines 13-41.

Conclusion

In view of the foregoing, Appellant respectfully submits that the rejections of all pending claims in this case are improper and should be overturned.

The Commissioner is hereby authorized to charge any deficiencies, or credit any overpayment associated with this appeal brief to Deposit Account No. 07-0960.

Respectfully submitted,

REISING ETHINGTON P.C.

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(viii) Claims Appendix

1.   A method for responding to digital vehicle requests, the method comprising:

     receiving a voice query at a telematics unit in a vehicle;

     converting the voice query to a digital signal;

     transmitting the digital signal from the telematics unit to a computer-end recipient at a call center node in communication with an information database, wherein the digital signal is sent to the computer-end recipient at the call center node via a digital packet data protocol over a wireless network;

     parsing the digital signal using the computer-end recipient at the call center node to determine an inquiry;

     accessing the information database based on the inquiry;

     formulating at least one response to the inquiry using the computer-end recipient;

     transmitting the at least one formulated response via the digital packet data protocol over the wireless network to the telematics unit; and

     translating the at least one formulated response to an analog format for playback in the vehicle.

2.   The method of claim 1 further comprising:

     optimizing the telematics unit for transmission of the voice query to a computer call center node.

3.   The method of claim 2 further comprising:

     filtering the received voice query before converting it to the digital signal.

4.   (Cancelled)

5.   The method of claim 1 further comprising:

     transmitting the signal to the call center using a cellular packet data connection.

6.   The method of claim 1 wherein transmitting the at least one formulated response via the digital packet data protocol over the wireless network to the telematics unit comprises:

transmitting the at least one formulated response in a digital streaming audio format.

7.   (Cancelled)

8.   The method of claim 1 wherein transmitting information via the wireless network further comprises transmitting information via an Internet protocol.

9-20.   (Cancelled)

21.   A method for responding to digital vehicle requests, comprising the steps of:

receiving a voice query at a telematics unit in a vehicle;

converting the voice query to a digital signal;

transmitting the digital signal from the telematics unit to a remote computer-end recipient via a digital cellular packet data protocol;

parsing the digital signal using the computer-end recipient to determine an inquiry;

formulating at least one response to the inquiry;

receiving a transmission of the at least one formulated response at the telematics unit via the digital cellular packet data protocol; and

presenting the at least one formulated response.

22.   The method of claim 21, wherein the digital cellular packet data protocol is the digital cellular 3G packet data protocol.

23.   The method of claim 21, wherein the step of transmitting the digital signal to a remote computer-end recipient via a digital cellular packet data protocol, further comprises transmitting the digital signal via a digital streaming audio format.

24. The method of claim 21, further comprising the step of compressing the digital signal prior to the transmitting step to reduce the amount of data transmitted in the data packets from the vehicle to the computer-end recipient.

25. The method of claim 24, further comprising the step of compressing the at least one response.

26. The method of claim 25, wherein the digital signal is compressed with a compression ratio at least twice the compression ratio used to compress the at least one response.

27. The method of claim 21, wherein the parsing step further comprises transforming the digital signal into computer commands to determine the inquiry.

28. The method of claim 21, wherein the parsing step and formulating step are automated by the computer-end recipient.

29. The method of claim 21, wherein the presenting step further comprises converting the at least one formulated response to an analog signal and playing the signal as audio through at least one speaker in the vehicle.

30. The method of claim 1, further comprising the step of compressing the digital signal prior to transmitting the digital signal to the call center node, wherein the compression reduces the amount of data transmitted in the data packets from the vehicle to the call center node.

31. The method of claim 30, further comprising the step of compressing the at least one response.

32. The method of claim 31, wherein the digital signal is compressed with a compression ratio at least twice the compression ratio used to compress the at least one response.

(ix) Evidence Appendix

None.

(x) **<u>Related Proceedings Appendix</u>**

     None.